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## Occupational Employment and Wages in Warren-Troy-Farmington Hills — May 2014

Workers in the Warren-Troy-Farmington Hills Metropolitan Division had an average (mean) hourly wage of \$23.04 in May 2014, similar to the nationwide average of \$22.71, according to the U.S. Bureau of Labor Statistics. Regional Commissioner Charlene Peiffer noted that, after testing for statistical significance, wages in the local area were higher than their respective national averages in 2 of the 22 major occupational groups: construction and extraction; and sales and related. Ten groups had significantly lower wages than their respective national averages, including life, physical, and social science; computer and mathematical; and arts, design, entertainment, sports, and media.

When compared to the nationwide distribution, local employment was more highly concentrated in 7 of the 22 occupational groups, including production; architecture and engineering; and sales and related. Conversely, 11 groups had employment shares significantly below their national representation, including education, training, and library; transportation and material moving; and construction and extraction. (See [table A](#) and [box note](#) at end of release.)

**Table A. Occupational employment and wages by major occupational group, United States and the Warren-Troy-Farmington Hills Metropolitan Division, and measures of statistical significance, May 2014**

Major occupational group	Percent of total employment		Mean hourly wage		
	United States	Warren	United States	Warren	Percent difference <sup>(1)</sup>
Total, all occupations.....	100.0%	100.0%	\$22.71	\$23.04	1
Management.....	5.0	5.2*	54.08	53.92	0
Business and financial operations.....	5.1	5.3	34.81	33.59*	-4
Computer and mathematical.....	2.8	3.2*	40.37	36.03*	-11
Architecture and engineering.....	1.8	4.4*	39.19	38.88	-1
Life, physical, and social science.....	0.8	0.4*	33.69	28.43*	-16
Community and social services.....	1.4	0.9*	21.79	22.45	3
Legal.....	0.8	0.9*	48.61	47.17	-3
Education, training, and library.....	6.2	4.3*	25.10	25.45	1
Arts, design, entertainment, sports, and media.....	1.3	1.3	26.82	25.15*	-6
Healthcare practitioners and technical.....	5.8	5.6	36.54	37.69	3
Healthcare support.....	2.9	3.3*	13.86	13.30*	-4
Protective service.....	2.4	1.6*	21.14	19.53*	-8
Food preparation and serving related.....	9.1	8.7*	10.57	10.34*	-2
Building and grounds cleaning and maintenance.....	3.2	2.7*	12.68	12.55	-1
Personal care and service.....	3.1	2.6*	12.01	11.61*	-3
Sales and related.....	10.5	11.5*	18.59	19.71*	6

**Table A. Occupational employment and wages by major occupational group, United States and the Warren-Troy-Farmington Hills Metropolitan Division, and measures of statistical significance, May 2014 - Continued**

Major occupational group	Percent of total employment		Mean hourly wage		
	United States	Warren	United States	Warren	Percent difference <sup>(1)</sup>
Office and administrative support.....	16.0	15.4*	17.08	16.67*	-2
Farming, fishing, and forestry.....	0.3	(2)	12.09	13.89	15
Construction and extraction.....	3.9	2.9*	22.40	24.35*	9
Installation, maintenance, and repair.....	3.9	3.6*	21.74	21.46	-1
Production.....	6.6	11.1*	17.06	17.17	1
Transportation and material moving.....	6.8	5.1*	16.57	15.78*	-5

<sup>(1)</sup> A positive percent difference measures how much the mean wage in Warren is above the national mean wage, while a negative difference reflects a lower wage.

<sup>(2)</sup> Estimate not released.

\* The percent share of employment or mean hourly wage for this area is significantly different from the national average of all areas at the 90-percent confidence level.

One occupational group—production—was chosen to illustrate the diversity of data available for any of the 22 major occupational categories. Warren-Troy-Farmington Hills had 126,800 jobs in production, accounting for 11.1 percent of local area employment, significantly higher than the 6.6-percent share nationally. The average hourly wage for this occupational group locally was \$17.17, compared to the national wage of \$17.06.

Some of the largest detailed occupations within the production group included team assemblers (29,360), machinists (9,460), and inspectors, testers, sorters, samplers, and weighers (8,230). Among the higher paying jobs were power plant operators and gas plant operators, with mean hourly wages of \$35.61 and \$33.45, respectively. At the lower end of the wage scale were pressers, textile, garment, and related materials (\$9.72) and laundry and dry-cleaning workers (\$9.91). (Detailed occupational data for production are presented in [table 1](#); for a complete listing of detailed occupations available go to [www.bls.gov/oes/2014/may/oes\\_47644.htm](http://www.bls.gov/oes/2014/may/oes_47644.htm) .)

Location quotients allow us to explore the occupational make-up of a metropolitan area by comparing the composition of jobs in an area relative to the national average. (See [table 1](#).) For example, a location quotient of 2.0 indicates that an occupation accounts for twice the share of employment in the area than it does nationally. In the Warren-Troy-Farmington Hills Metropolitan Division, above-average concentrations of employment were found in many of the occupations within the production group. For instance, model makers, metal and plastic were employed at 10.2 times the national rate in Warren, and forging machine setters, operators, and tenders, metal and plastic, at 10.1 times the U.S. average. On the other hand, bakers had a location quotient of 1.0 in Warren, indicating that this particular occupation's local and national employment shares were similar.

These statistics are from the Occupational Employment Statistics (OES) survey, a federal-state cooperative program between BLS and State Workforce Agencies, in this case, the Michigan Department of Technology, Management and Budget.

### Note

A value that is statistically different from another does not necessarily mean that the difference has economic or practical significance. Statistical significance is concerned with the ability to make confident statements about a universe based on a sample. It is entirely possible that a large difference between two values is not significantly different statistically, while a small difference is, since both the size and heterogeneity of the sample affect the relative error of the data being tested.

### Technical Note

The Occupational Employment Statistics (OES) survey is a semiannual mail survey measuring occupational employment and wage rates for wage and salary workers in nonfarm establishments in the United States. Guam, Puerto Rico, and the Virgin Islands are also surveyed, but their data are not included in the national estimates. OES estimates are constructed from a sample of about 1.2 million establishments. Forms are mailed to approximately 200,000 sampled establishments in May and November each year. May 2014 estimates are based on responses from six semiannual panels collected over a 3-year period: May 2014, November 2013, May 2013, November 2012, May 2012, and November 2011. The overall national response rate for the six panels is 74.3 percent based on establishments and 70.5 percent based on weighted sampled employment. The unweighted employment of sampled establishments across all six semiannual panels represents approximately 57.1 percent of total national employment. (Response rates are slightly lower for these estimates due to the federal shutdown in October 2013.) The sample in the Warren-Troy-Farmington Hills Metropolitan Division included 5,856 establishments with a response rate of 75 percent. For more information about OES concepts and methodology, go to [www.bls.gov/news.release/ocwage.tn.htm](http://www.bls.gov/news.release/ocwage.tn.htm).

The OES survey provides estimates of employment and hourly and annual wages for wage and salary workers in 22 major occupational groups and 821 detailed occupations for the nation, states, metropolitan statistical areas, metropolitan divisions, and nonmetropolitan areas. In addition, employment and wage estimates for 94 minor groups and 458 broad occupations are available in the national data. OES data by state and metropolitan/nonmetropolitan area are available from [www.bls.gov/oes/current/oesrcst.htm](http://www.bls.gov/oes/current/oesrcst.htm) and [www.bls.gov/oes/current/oesrcma.htm](http://www.bls.gov/oes/current/oesrcma.htm), respectively.

The May 2014 OES estimates are based on the 2010 Standard Occupational Classification (SOC) system and the 2012 North American Industry Classification System (NAICS). Information about the 2010 SOC is available on the BLS website at [www.bls.gov/soc](http://www.bls.gov/soc) and information about the 2012 NAICS is available at [www.bls.gov/bls/naics.htm](http://www.bls.gov/bls/naics.htm).

### Area definitions

The substate area data published in this release reflect the standards and definitions established by the U.S. Office of Management and Budget.

The **Warren-Troy-Farmington Hills, Mich. Metropolitan Division** includes Lapeer, Livingston, Macomb, Oakland, and St. Clair Counties.

### Additional information

OES data are available on our regional web page at [www.bls.gov/regions/midwest](http://www.bls.gov/regions/midwest). Answers to frequently asked questions about the OES data are available at [www.bls.gov/oes/oes\\_ques.htm](http://www.bls.gov/oes/oes_ques.htm). Detailed technical information about the OES survey is available in our Survey Methods and Reliability Statement on the BLS website at [www.bls.gov/oes/2014/may/methods\\_statement.pdf](http://www.bls.gov/oes/2014/may/methods_statement.pdf).

Information in this release will be made available to sensory impaired individuals upon request . Voice phone: 202-691-5200; Federal Relay Service: 800-877-8339.

**Table 1. Employment and wage data from the Occupational Employment Statistics survey, by occupation, Warren-Troy-Farmington Hills Metropolitan Division, May 2014**

Occupation <sup>(1)</sup>	Employment		Mean wages	
	Level <sup>(2)</sup>	Location quotient <sup>(3)</sup>	Hourly	Annual <sup>(4)</sup>
Production Occupations.....	126,800	1.7	\$17.17	\$35,720
First-Line Supervisors of Production and Operating Workers.....	6,530	1.3	29.84	62,060
Coil Winders, Tapers, and Finishers.....	110	0.9	16.86	35,070
Electrical and Electronic Equipment Assemblers.....	1,970	1.1	13.86	28,820
Electromechanical Equipment Assemblers.....	120	0.3	16.46	34,230
Engine and Other Machine Assemblers.....	960	3.0	24.74	51,450
Structural Metal Fabricators and Fitters.....	540	0.8	18.18	37,820
Fiberglass Laminators and Fabricators.....	90	0.6	14.95	31,090
Team Assemblers.....	29,360	3.1	15.71	32,670
Assemblers and Fabricators, All Other.....	4,340	2.2	12.75	26,530
Bakers.....	1,480	1.0	13.53	28,150
Butchers and Meat Cutters.....	1,030	0.9	14.46	30,080
Meat, Poultry, and Fish Cutters and Trimmers.....	550	0.4	11.07	23,030
Food and Tobacco Roasting, Baking, and Drying Machine Operators and Tenders.....	40	0.2	13.85	28,800
Food Batchmakers.....	500	0.5	12.72	26,460
Computer-Controlled Machine Tool Operators, Metal and Plastic.....	2,950	2.4	19.49	40,530
Computer Numerically Controlled Machine Tool Programmers, Metal and Plastic.....	520	2.5	23.19	48,230
Extruding and Drawing Machine Setters, Operators, and Tenders, Metal and Plastic.....	1,070	1.8	15.69	32,640
Forging Machine Setters, Operators, and Tenders, Metal and Plastic.....	1,830	10.1	12.92	26,870
Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic.....	5,800	3.6	15.78	32,820
Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic.....	240	1.7	19.58	40,720
Grinding, Lapping, Polishing, and Buffing Machine Tool Setters, Operators, and Tenders, Metal and Plastic.....	1,110	1.9	16.42	34,140
Lathe and Turning Machine Tool Setters, Operators, and Tenders, Metal and Plastic.....	790	2.2	17.62	36,660
Milling and Planing Machine Setters, Operators, and Tenders, Metal and Plastic.....	420	2.3	19.12	39,770
Machinists.....	9,460	2.9	20.18	41,980
Metal-Refining Furnace Operators and Tenders.....	100	0.6	12.66	26,340
Model Makers, Metal and Plastic.....	530	10.2	26.38	54,880
Patternmakers, Metal and Plastic.....	<sup>(5)</sup>	<sup>(5)</sup>	20.94	43,550
Foundry Mold and Coremakers.....	90	0.9	15.05	31,310
Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic.....	3,710	3.4	13.54	28,160
Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic.....	1,150	1.4	16.85	35,040
Tool and Die Makers.....	4,700	7.3	25.44	52,910
Welders, Cutters, Solderers, and Brazers.....	3,060	1.0	18.40	38,270
Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders.....	690	1.5	15.07	31,340
Heat Treating Equipment Setters, Operators, and Tenders, Metal and Plastic.....	770	4.3	15.61	32,470
Layout Workers, Metal and Plastic.....	50	0.4	22.04	45,850
Plating and Coating Machine Setters, Operators, and Tenders, Metal and Plastic.....	610	2.0	13.39	27,850
Tool Grinders, Filers, and Sharpeners.....	270	3.0	19.81	41,200
Metal Workers and Plastic Workers, All Other.....	330	1.8	15.83	32,920
Prepress Technicians and Workers.....	250	0.8	17.12	35,610
Printing Press Operators.....	990	0.7	15.73	32,710

**Table 1. Employment and wage data from the Occupational Employment Statistics survey, by occupation, Warren-Troy-Farmington Hills Metropolitan Division, May 2014 - Continued**

Occupation <sup>(1)</sup>	Employment		Mean wages	
	Level <sup>(2)</sup>	Location quotient <sup>(3)</sup>	Hourly	Annual <sup>(4)</sup>
Print Binding and Finishing Workers.....	330	0.8	15.04	31,280
Laundry and Dry-Cleaning Workers.....	1,300	0.8	9.91	20,620
Pressers, Textile, Garment, and Related Materials.....	240	0.6	9.72	20,220
Sewing Machine Operators.....	1,010	0.8	12.83	26,680
Shoe and Leather Workers and Repairers.....	(5)	(5)	13.60	28,300
Tailors, Dressmakers, and Custom Sewers.....	(5)	(5)	14.10	29,320
Textile Cutting Machine Setters, Operators, and Tenders.....	50	0.4	15.63	32,510
Textile Knitting and Weaving Machine Setters, Operators, and Tenders.....	50	0.3	12.18	25,330
Upholsterers.....	(5)	(5)	14.80	30,770
Textile, Apparel, and Furnishings Workers, All Other.....	(5)	(5)	17.59	36,590
Cabinetmakers and Bench Carpenters.....	490	0.7	16.44	34,200
Furniture Finishers.....	50	0.4	15.86	32,990
Patternmakers, Wood.....	(5)	(5)	21.45	44,620
Woodworking Machine Setters, Operators, and Tenders, Except Sawing.....	270	0.5	12.43	25,850
Power Plant Operators.....	240	0.7	35.61	74,060
Stationary Engineers and Boiler Operators.....	90	0.3	28.85	60,010
Water and Wastewater Treatment Plant and System Operators.....	350	0.4	23.78	49,450
Chemical Plant and System Operators.....	80	0.2	(5)	(5)
Gas Plant Operators.....	140	1.0	33.45	69,570
Petroleum Pump System Operators, Refinery Operators, and Gaugers.....	(5)	(5)	24.22	50,380
Chemical Equipment Operators and Tenders.....	360	0.7	19.64	40,860
Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders.....	210	0.6	18.40	38,270
Crushing, Grinding, and Polishing Machine Setters, Operators, and Tenders.....	60	0.3	16.76	34,860
Grinding and Polishing Workers, Hand.....	320	1.3	13.18	27,410
Mixing and Blending Machine Setters, Operators, and Tenders.....	1,300	1.3	16.07	33,430
Cutting and Slicing Machine Setters, Operators, and Tenders.....	530	1.0	15.34	31,910
Extruding, Forming, Pressing, and Compacting Machine Setters, Operators, and Tenders.....	610	1.1	12.96	26,960
Inspectors, Testers, Sorters, Samplers, and Weighers.....	8,230	2.0	17.32	36,030
Jewelers and Precious Stone and Metal Workers.....	320	1.7	18.14	37,720
Dental Laboratory Technicians.....	560	1.9	20.57	42,780
Medical Appliance Technicians.....	60	0.5	21.62	44,970
Ophthalmic Laboratory Technicians.....	700	3.0	17.06	35,490
Packaging and Filling Machine Operators and Tenders.....	(5)	(5)	12.72	26,460
Coating, Painting, and Spraying Machine Setters, Operators, and Tenders.....	1,790	2.3	12.88	26,800
Painters, Transportation Equipment.....	380	0.9	28.41	59,090
Painting, Coating, and Decorating Workers.....	190	1.4	14.16	29,460
Photographic Process Workers and Processing Machine Operators.....	130	0.5	11.37	23,640
Adhesive Bonding Machine Operators and Tenders.....	(5)	(5)	10.73	22,310
Cleaning, Washing, and Metal Pickling Equipment Operators and Tenders.....	90	0.6	14.87	30,940
Etchers and Engravers.....	(5)	(5)	15.37	31,970
Molders, Shapers, and Casters, Except Metal and Plastic.....	570	1.9	15.18	31,580
Paper Goods Machine Setters, Operators, and Tenders.....	440	0.6	19.18	39,900
Helpers--Production Workers.....	6,590	1.9	13.65	28,390

**Table 1. Employment and wage data from the Occupational Employment Statistics survey, by occupation, Warren-Troy-Farmington Hills Metropolitan Division, May 2014 - Continued**

Occupation <sup>(1)</sup>	Employment		Mean wages	
	Level <sup>(2)</sup>	Location quotient <sup>(3)</sup>	Hourly	Annual <sup>(4)</sup>
Production Workers, All Other.....	3,850	2.1	16.44	34,190

<sup>(1)</sup> For a complete listing of all detailed occupations in Warren-Troy-Farmington Hills, MI Metropolitan Division, see [www.bls.gov/oes/current/oes\\_47644.htm](http://www.bls.gov/oes/current/oes_47644.htm).

<sup>(2)</sup> Estimates for detailed occupations do not sum to the totals because the totals include occupations not shown separately. Estimates do not include self-employed workers.

<sup>(3)</sup> The location quotient is the ratio of the area concentration of occupational employment to the national average concentration. A location quotient greater than one indicates the occupation has a higher share of employment than average, and a location quotient less than one indicates the occupation is less prevalent in the area than average.

<sup>(4)</sup> Annual wages have been calculated by multiplying the hourly mean wage by a 'year-round, full-time' hours figure of 2,080 hours; for those occupations where there is not an hourly mean wage published, the annual wage has been directly calculated from the reported survey data.

<sup>(5)</sup> Estimate not released.